

FORM PTO-1390  
REV. 5-93US DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTORNEYS DOCKET NUMBER  
**P00,0502****TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371**

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)

**09/509204**INTERNATIONAL APPLICATION NO.  
**PCT/EP98/06107**INTERNATIONAL FILING DATE  
**September 25, 1998**PRIORITY DATE CLAIMED  
**September 25, 1997**TITLE OF INVENTION **"VIRTUAL PERSONS FOR HELPING A USER TO USE DEVICES AND COMMUNICATIVE NETWORKS SUCH AS ESPECIALLY A DEVICE FOR OUTPUTTING INDIVIDUALLY USED CARDS"**

APPLICANT(S) FOR DO/EO/US

**Hans-Diedrich Krefit**

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay.
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ has been transmitted by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. §371(c)(3))
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98; (PTO 1449, Prior Art, Search Report).
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included.  
(SEE ATTACHED ENVELOPE)
13. ☒ A FIRST preliminary amendment.
  - ☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:
  - a. ☒ Submission of Drawings (1 sheet)
  - b. ☒ Small Entity Declaration (unexecuted)
  - c. ☒ EXPRESS MAIL # EL470808135US dated March 23, 2000.

U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5)

INTERNATIONAL APPLICATION NO.  
PCT/EP98/06107ATTORNEY'S DOCKET NUMBER  
P00,0502

09/509204

- 17.
- ☒
- The following fees are submitted:

**BASIC NATIONAL FEE (37 C.F.R. 1.492(a)(1)-(5):**

Search Report has been prepared by the EPO or JPO ..... \$840.00

International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) ... \$670.00

No international preliminary examination fee paid to USPTO (37 C.F.R. 1.482) but  
international search fee paid to USPTO (37 C.F.R. 1.445(a)(2)) ..... \$760.00Neither international preliminary examination fee (37 C.F.R. 1.482) nor international  
search fee (37 C.F.R. 1.445(a)(2)) paid to USPTO ..... \$970.00International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) and all  
claims satisfied provisions of PCT Article 33(2)-(4) ..... \$ 96.00**ENTER APPROPRIATE BASIC FEE AMOUNT =**

CALCULATIONS

PTO USE ONLY

\$ 840.00

00

Surcharge of \$130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months  
from the earliest claimed priority date (37 C.F.R. 1.492(e)).

\$

Claims

Number Filed

Number  
Extra

Rate

Total Claims

32

- 20 =

12

X \$ 22.00

\$ 264.00

0

Independent Claims

2

- 3 =

X \$ 74.00

\$

0

Multiple Dependent Claims

\$230.00 +

\$

0

**TOTAL OF ABOVE CALCULATIONS =**

\$ 1,104.00

00

Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must  
also be filed. (Note 37 C.F.R. 1.9, 1.27, 1.28)

\$

**SUBTOTAL =**

\$

Processing fee of \$130.00 for furnishing the English translation later than ☐ 20 ☐ 30 months  
from the earliest claimed priority date (37 CFR 1.492(f)).

\$

**TOTAL NATIONAL FEE =**

\$ 1,104.00

00

Fee for recording the enclosed assignment (37 C.F.R. 1.21(h). The assignment must be  
accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property

+

**TOTAL FEES ENCLOSED =**

\$ 1,104.00

00

Amount to be  
refunded

\$

charged

\$

- a.
- ☒
- A check in the amount of \$
- 1,104.00
- to cover the above fees is enclosed.

- b.
- ☐
- Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees. A
- 
- duplicate copy of this sheet is enclosed.

- c.
- ☒
- The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any
- 
- overpayment to Deposit Account No.
- 08-2290
- . A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 C.F.R. 1.494 or 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b)) must be  
filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

SIGNATURE

Hill & Simpson  
A Professional Corporation  
85th Floor Sears Tower  
Chicago, Illinois 60606Keyin W. Guynn  
NAME(29,927)  
Registration Number

#3  
Applicant or Patentee: Hans-Diedrich Kref Attorney's Docket No. P 00.0502

Serial or Patent No. \_\_\_\_\_ Filed or Issued: \_\_\_\_\_

For: "VIRTUAL PERSONS FOR ASSISTING IN THE USE OF DEVICES AND COMMUNICATIVE NETWORKS,  
PARTICULARLY FOR ASSISTING IN THE OUTPUT OF INDIVIDUALLY USEABLE CARDS"

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY**

**STATUS (37 CFR 1.9 (f) and 1.27 (e)) - SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:  
☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN Angewandte Digital Elektronik

ADDRESS OF CONCERN Ecksweg 4, D21521 Dassendorf, Germany

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled: "VIRTUAL PERSONS FOR ASSISTING IN THE USE OF DEVICES AND COMMUNICATIVE NETWORKS, PARTICULARLY FOR ASSISTING IN THE OUTPUT OF INDIVIDUALLY USEABLE CARDS"

by inventor Hans-Diedrich Kref described in

- ☒ the specification filed herewith  
☐ application Serial No. \_\_\_\_\_, filed \_\_\_\_\_  
☐ Patent No. \_\_\_\_\_, issued \_\_\_\_\_

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities (37CFR1.27).

NAME Angewandte Digital Elektronik

ADDRESS Ecksweg 4, D21521 Dassendorf, Germany

☐ individual ☒ small business concern ☐ non-profit organization

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

☐ individual ☐ small business concern ☐ non-profit organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date and which status as a small entity is no longer appropriate. (37 CFR 1.28 (b))

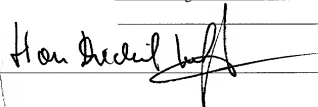
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Hans-Diedrich Kref

TITLE OF PERSON OTHER THAN OWNER \_\_\_\_\_

ADDRESS OF PERSON SIGNING Ecksweg 4 D-21521 Dassendorf, Germany

SIGNATURE



DATE 24. Nov. 2000

- 1 -

BOX PCT  
IN THE UNITED STATES ELECTED OFFICE  
OF THE UNITED STATES PATENT AND TRADEMARK OFFICE  
UNDER THE PATENT COOPERATION TREATY-CHAPTER II

5

**PRELIMINARY AMENDMENT**

APPLICANT(S): Hans-Diedrich Kreft, et al DOCKET NO: P 00,0502

SERIAL NO: GROUP ART UNIT:

EXAMINER:

INTERNATIONAL APPLICATION NO: PCT/EP98/06107

10 INTERNATIONAL FILING DATE: 25 September 1998

INVENTION: **"VIRTUAL PERSONS FOR ASSISTING IN THE USE  
OF DEVICES AND COMMUNICATIVE NETWORKS,  
PARTICULARLY FOR ASSISTING IN THE OUTPUT OF  
INDIVIDUALLY USEABLE CARDS"**

15 **Hon. Assistant Commissioner for Patents  
BOX PCT  
Washington, D.C. 20231**

S I R:

Please amend the above-identified International Application before entry into  
20 the national stage at the U.S. Patent and Trademark Office as follows.

**IN THE SPECIFICATION:**

Please amend the specification as follows:

09509204 070600

At page 1, line 5 replace "Technical Field:" with "**BACKGROUND OF THE INVENTION**".

At page 1, lines 11-12, delete " , according to the preamble of claim 1";

at line 14 delete "Problem:";

5 at line 19 delete "obtaining to significance" and replace with -- becoming significant--;

at line 27 delete "Technical Objective:" and insert --**SUMMARY OF THE INVENTION**--.

10 On page 2, after line 20 insert the heading "**BRIEF DESCRIPTION OF THE DRAWINGS**";

at line 23, after "Figure 1" insert --schematically--;

after line 25 insert the heading --**DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**--.

On page 4, line 22 delete "patent" and insert --invention--.

15 On page 5, line 6 delete "in the patent" and insert --herein--;

in line 19, delete "patent (claim 1) and insert --invention--.

On page 6, line 12 delete "by the patent" and insert --herein--.

On page 17, line 23 after the word "Coupler" insert --and incorporated herein by reference--.

20 On page 19, line 14 delete "Commercial Application";  
after line 20 add the following new paragraph:

--As is apparent from the foregoing specification, the invention is susceptible of being embodied with various alterations and modifications which may differ particularly from those that have been described in the preceding specification and description. It should be understood that we wish to embody within the scope of the patent warranted hereon all such modifications as reasonably and properly come within the scope of our contribution to the art.--

**IN THE CLAIMS:**

Delete claims 1-32 and replace with new claims 33 - 64 as follows:

33. A method for audio-visual presentation of data and/or programs that are used by users in communicative networks for the transmission and/or presentation of audio-visual data and/or programs, upon employment of an electrical device having an optical and/or acoustic display means such as picture screen and/or loudspeaker for audio-visual presentation of these data and/or programs, comprising the steps of

- 1) requesting individual assistance by the user of the device and/or network that is generated by the program;
- 2) selectively producing the individual assistance, according to the user requests, produced in the form of a neutral-virtual person, being audio-visually produced on one or more devices by the programs and/or being transmitted by network to remote devices;
- 3) simulating the neutral-virtual person for assisting the user in his individual use of the device and/or network on the device in audio-visual presentation with properties that simulate the spatial behavior of natural persons;
- 4) unambiguously allocating a specific, individual-virtual person to a specific user and/or a group of users by an identifier and/or encoding and/or program, whereby the input of the identifier ensues via an input means into

which information are input acoustically or optically or mechanical or tactilely with optical or acoustic or tactile devices or a keyboard;

- 5                   5)       only activating the individual-virtual person on the device and/or in the network during a time span  $\Delta t$  that is determined by the identification of the user with his specific feature or features, his specific identifier or identifiers via a repeated interrogation in the input device; and
- 6)       authenticating the individual-virtual person in terms of its action by the user for one or more users during the time span  $\Delta t$ .

34.       A method according to claim 33, further including the steps of

10           1)       requiring a compilation and/or joining of sub-programs and data that are locally present in various devices or memories or are present locally separated in the device for audio-visual presentation of the individual-virtual person;

                  2)       activating the sub-programs with a feature and/or its own, specific encoding or with a shared, uniform code/feature;

15

                  3)       automatically repeatedly interrogating the code by the individual-virtual person and generating said code only during the time span  $\Delta t$ ;

                  4)       preventing the joining, compiling and/or keeping active the sub-programs given failure of the code to arrive.

20       35.       A method according to claim 33, wherein

                  1)       the neutral-virtual person has data available that are available for an unprotected data inquiry and has data available that are exclusively available for a protected data inquiry;

                  2)       whereby the unprotected data are presented by the neutral-virtual person given an inquiry at the device;

25

                  3)       whereby the neutral-virtual person has properties available

that are the same for a plurality of neutral-virtual persons;

4) whereby the neutral-virtual person is authorized vis-a-vis a data inquiry only for a behavior that is restricted compared to the authentic individual-virtual person.

- 5           36.     A method according to claim 33, including the steps of
- 1)     displaying the individual-virtual person on a picture screen or a display means of a home computer and/or PC;
- 2)     allocating the individual-virtual person to the user by a specific encoding and/or a program;
- 10           3)     integrating the input device as a device part in the home computer and/or PC.

37.     A method according to claim 36, including the step wherein the individual-virtual person appearing on a home computer or PC assumes the jobs that are implemented by operating systems on the basis of user interfaces.

- 15           38.     A method according to claim 37, including the step wherein parts of the user interface of an operating system are supplemented by an individual-virtual person.

39.     A method according to claim 36, including the step wherein simultaneously with the appearance of the individual-virtual person on the picture screen or the display means of the home computer and/or of the PC, an information appears that can be read and/or heard or interpreted in some other way by a person.
- 20



40. A method according to claim 36, further including the steps wherein

- 1) a first neutral-virtual person, that belongs to a group of different neutral-virtual persons with comparable programs and/or data and/or features appears first in time on the device or home computer or PC;
- 2) this neutral-virtual person additionally assumes programs and/or data and/or features at the later point in time of the authentication in the input device that lead to a specific embodiment of the neutral-virtual person;
- 3) this neutral-virtual person becomes the individual-virtual person.

41. A method according to claim 33, including the steps wherein the interrogation of data and/or programs allocated to the individual-virtual person is only possible for data and/or programs that have arisen before a point in time or within a time span  $\Delta t$  and is inhibited for all further data and/or programs that have arisen after this point in time or beyond this time span.

42. A method according to claim 33, including the steps wherein

- 1) the input device can identify more than one natural person in its limited, spatial environment on the basis of optical and/or acoustic sensors;
- 2) the individual-virtual person is presented for the person only to a limited extent on the display means of the device during the time at least two natural persons are identified;
- 3) this restricted, individual-virtual person has only a part of the features, programs and/or data available to it that the complete individual-virtual person has available to it.

43. A method according to claim 33, including the steps wherein

1) a local, individual-virtual person exists;

2) this local, individual-virtual person is a restricted, individual-  
5 virtual person and is presented for persons on and/or in the local display means of  
the audio-visual device;

3) the local, individual-virtual person is defined with its  
features, programs and/or data by properties and/or encodings which a device has  
locally available to it during the time span  $\Delta t$ , said device calling and/or  
presenting the restricted, individual-virtual person.

10 44. A method according to claim 33, including the step wherein an  
individual-virtual person appears as a participant for natural persons in a game on  
the display means of the audio-visual device and/or PC and/or home computer.

45. A method according to claim 33, including the step wherein an  
individual-virtual person simulates a teacher for the communication of lesson  
15 contents for a student.

46. A method according to claim 33, including the steps wherein the  
audio visual device is connected to a means for generating the individual-virtual  
person, said means automatically receiving data and/or programs from satellites.

20 47. A method according to claim 33, including the steps wherein  
1) a neutral-virtual person is mixed into the executive sequence  
of programs;  
2) the program represents sequences of actions, comparable to  
films;  
3) the neutral-virtual person can be replaced by an individual-

virtual person;

4) the individual-virtual person assumes the predetermined action role of the virtual person.

48. A method according to claim 33, including the steps wherein

1) an individual-virtual person is transmitted to remote devices via a communicative network;

2) the individual-virtual person implements specific operations and/or device settings in the remote devices;

3) the operations and/or device settings correspond to those that a natural person has initiated for an individual-virtual person via setting and/or programming.

49. A method according to claim 33, including the steps wherein

1) an individual-virtual person carries out tasks in a device remote from the location of the user;

2) the device has technical devices available to it that can acquire data and/or programs in the remote environment;

3) the acquired and/or programs are transmitted to the location of the user;

4) the remote data and/or programs are edited at the location of the user;

5) the user encounters an audio-visual environment that corresponds to the remote environment.

50. A method according to claim 33, including the steps wherein
- 1) an individual-virtual person has a proposal list of behaviors and/or settings available to it;
  - 2) user determines the settings by selection;
  - 3) the individual-virtual person is lent specific properties.

51. A method according to claim 33, including the step wherein a first natural person communicates with a second natural person via an individual-virtual person.

52. A method according to claim 33, including the steps wherein
- 1) a first natural person communicates with an individual-virtual person in a first natural language;
  - 2) the individual-virtual person communicates with a second natural person in a second natural language.

53. A method according to claim 33, including the steps wherein
- 1) an individual-virtual person has specific encodings available;
  - 2) the encodings allow the individual-virtual person to acquire specific protected data and/or program areas.

54. A method according to claim 33, including the steps wherein
- 1) a plurality of individual-virtual persons are present at the same time in a device at a location;
  - 2) a virtual meeting of virtual persons is produced during the time  $\Delta t$ .

55. A method according to claim 33, including the steps of

- 1) using an individual-virtual person via the communicative network or, respectively, device at the location B for remote diagnosis of the condition of a natural person at a location A1;
- 2) the natural person to be diagnosed is located at the location B;
- 3) the natural person at the location A controls the replies of the individual-virtual person at the location B via the communicative network or, respectively, device.

56. A method according to claim 33, including the steps of

- 1) providing a virtual person as virtual diagnostician for diagnosis via the communicative network or, respectively, device;
- 2) an individual-virtual diagnostician has information available that are allocated to a specific user;
- 3) when this virtual diagnostician is called, this is available to the user/caller with specific information during the time span  $\Delta t$ .

57. A method according to claim 33, including the steps of

- 1) permitting a specific geometrical area of an individual-virtual person to be optically/graphically touched by mouse pointers;
- 2) displaying data/program/graphics that are characteristic of the touched, geometrical region.

58. A method according to claim 33, including the steps of

- 1) activating programs via an individual-virtual person;
  - 2) interrogatory/collecting data via these activated programs
- from a plurality of individual-virtual persons with the communicative network or,

respectively, devices;

3) wherein automated, statistical data collections about individual-virtual persons are possible.

59. A method according to claim 33, including the steps of

- 5                   1) connecting an individual-virtual person to devices by electromagnetic data communication;
- 2) the devices being worn by a user;
- 3) the individual-virtual person processing the data that derive from the device of the user.

60. A method according to claim 33, including the steps of

- 10                   1) localizing a combination of devices at a remote location at which cards such as chip cards are edited for issue,
- are produced according to individual user requests,
- 15                   are provided/loaded with data and/or programs for one or more persons;
- 2) selectively making present one or more electronic communication channels to the remote devices;
- 3) making available the cards, devices, programs at the remote
- 20                   location to one or more users via electronic communication possibilities;
- 4) producing new cards at the remote location according to individual user requests;
- 5) sending the cards to the user or picking up the cards by the user after being produced;
- 25                   6) making a request by the user of an individual assistance via the electronic communication possibilities;

7) making available the individual assistance, based on the request of the user, is made available by a natural person, and/or in the form of a program, and/or in the form of the virtual person.

61. A method according to claim 33, including the step of, erasing information as generated by the input device for authentication to arrive, data holdings and/or programs that have characterized or, respectively, defined individual-virtual persons given the failure of data.

62. An electrical device for audio-visual presentation of data and/or programs that are used by users in communicative networks or the transmission and/or presentation of audio-visual data and/or programs, whereby the device comprises an optical and/or acoustic display means such as picture screen and/or loudspeaker for audio-visual presentation of these data and/or programs, comprising

1) means whereby a user of the device and/or network can request an individual assistance that is generated by a program;

2) whereby the individual assistance, based on user requests, is selectively produced in the form of a neutral-virtual person by the programs, being audio-visually produced on one or more devices and/or being transmitted to remote devices by the network;

3) whereby the neutral-virtual person for assisting the user in his individual use of the device and/or of the network is simulated on the device in audio-visual presentation with characteristics that simulate the spatial behavior of natural persons;

4) whereby a specific user and/or a group of users has a specific, individual-virtual person allocated to it unambiguously by an identifier and/or encoding and/or program, and the input of the identifier ensues via an input device into which information are input acoustically or optically or mechanically or tactilely with optical or acoustic or tactile devices or a keyboard;

5) whereby the individual-virtual person is only activated on the device and/or in the network during a time span  $\Delta t$  that is determined by the identification of the user with his specific feature/features, his specific identifier/identifiers via a repeated interrogation in the input device;

6) wherewith the individual-virtual person is authenticated in terms of its actions by the user for one or more users during the time span  $\Delta t$ .

63. A device according to claim 62, wherein

1) a combination of devices is localized at a remote location at which cards such as chip cards are edited for issue, are produced according to individual user requests, are provided/loaded with data and/or programs for one or more persons;

2) whereby, optionally, one or more electronic communication channels are present to the remote devices;

3) whereby the cards, devices, programs at the remote location are made available to one or more users via electronic communication possibilities;

4) whereby new cards are produced at the remote location according to individual user requests;

5) whereby the cards are handed over to the user after being produced;



6) whereby an individual assistance can be requested by the user via the electronic communication possibilities;

7) whereby the individual assistance, based on the request of the user, is optionally performed

by a natural person,  
and/or in the form of a program,  
and/or in the form of the virtual person.

64. A device according to claim 62, wherein

1) a first part of the device is a card magazine for keeping different, non-personalized chip cards on hand;

2) whereby the properties of a chip card can be defined by the user;

3) whereby the user makes use of a virtual person for determining/producing the use of the chip card.

#### REMARKS

The foregoing amendments have been made to place the application in U.S. format. No new matter has been added.

Respectfully submitted,

  
KEVIN W. GYNN

(Reg. No. 29,927)

HILL & SIMPSON

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ATTORNEY FOR APPLICANT

**SPECIFICATION****VIRTUAL PERSONS FOR ASSISTING IN THE USE OF DEVICES AND COMMUNICATIVE NETWORKS, PARTICULARLY FOR ASSISTING IN THE OUTPUT OF INDIVIDUALLY USEABLE CARDS**

5 Technical Field:

The invention is directed to a method for audio-visual presentation of data and/or programs that are used by users in communicative networks for the transmission and/or presentation of audio-visual data and/or programs, upon employment of an electrical device having an optical and/or acoustic display means such as a picture screen and/or loudspeaker, for audio-visual presentation of these data and/or programs according to the preamble of claim 1 and is also directed to an apparatus for the implementation of the method.

15 Problem:

In technical systems for the transmission of audio-visual data and programs, for example for electronic purchasing or money transfers, particularly with increasing networking of the systems with one another, the question of authenticity, namely the assurance of the veracity of the presence of a user H of the system is obtaining to significance. A user H in network systems can physically be at location Y at time T1, whereas it is simulated to the system that he was located at location X at the same time, whereby this dissimulation is to be precluded. Programs that are authorized to implement actions over a time duration by a user are called authenticated programs. Likewise, more and more chip cards are entering into traffic for utilizing such devices for the purpose of purchasing or for participating in traffic and many other things.

25 Technical Objective:

The object of the invention is to facilitate the operation of the systems and/or devices and/or networks for users of technical systems and/or apparatus that

are connected to one another via electronic, communicative networks, in that programs and apparatus that act virtual persons for a user in the networks, namely as apparent persons generated by programs, are authenticated by the user H. Further users of the network should be able to depend thereon such that a virtual person is authorized by its creator to act in a specific situation. In particular, a virtual person should be suitable for the output of chip cards in the card service center.

#### Disclosure Of The Invention And the Advantages Thereof:

The object is achieved by the features of the claims. Advantageously, a deception of the system is thereby precluded, namely to the effect that a user was located at location X at point in time T1, by contrast where to he was physically located at the location Y at the same time T1. Advantageously, the method or, respectively, the apparatus generates virtual persons with whom the user can enter into interaction. Likewise, further users of the network can depend thereon that a virtual person is authorized by its creator to act in a specific situation. Inventively, it is possible to facilitate the utilization of electronic apparatus and/or systems, as are present due to the connection of apparatus in communicative networks, in that certainty is produced regarding the authorization of the use and activation of programs by user H.

The drawing serves the purpose of revealing the limitation between the possibilities of presenting virtual persons VP on technical equipment:

Figure 1 shows the presentation possibilities of virtual persons VP on technical equipment in three illustrations a, b and c; and

Figure 2 symbolically shows a card service center.

H references the natural user H of a technical equipment T3, this user residing at location X. T3 is composed of a technical apparatus system at location Y that contains a medium for visual presentation, as represented by

a two-dimensional picture screen or - in future - also represented by three-dimensionally displaying medium. T3 can also contain devices for acoustic input and output of information. In particular instances, T3 can also contain mechanical devices that simulate or image the movements of a user H. It can be a matter of technical systems that transmit mechanical force via levers and can move in space. Such systems for simulating human movements are known. Mechanical systems can also be employed that register the movement of a user H, for example in tactile form, and transmit them from the location X to the location Y in the form of electronic data.

Section 1a of the Figure symbolizes how data of a natural person H are acquired by sensors T1, and how the properties and movements of H are forwarded to a technical system T2 via connecting elements C2, namely lines, visual, acoustic or tactile transmission elements. T2 is composed of the standard devices of a data-processing system, such as electronic processor, memories for data and programs. T2, with its programs, is in the position to control the system T3 with the data that arrive via C2. In this way, T3 can present images of H audio-visually and/or spatially in the form RVP (related virtual person). There is a relationship between sensor acquisition T1 and presentation of a virtual person with the assistance of T3. Such systems mainly serve for simulating the spatial behavior of humans. Answer backs to the user H can be communicated via the data link C4 in the form of visual presentations and/or tactile sensory impressions that a user H can perceive, for example in audio-visual helmets or in gloves or other touch devices.

The illustration of the technical devices T1 from Figure 1a is omitted in Figure 1c. A user H directly controls the technical system T2 that is constructed in a comparable way compared to the description of Figure 1a. The control preferably ensues via a keyboard or further auxiliaries such as mouse and/or joy stick. A virtual person VP generated by a program T2 appears on the system T3. This virtual person VP mainly serves for the presentation of

playing Figures - playing virtual person - whose behavior is controlled by the user H via the operating elements of T2.

Figure 1a and Figure 1c symbolize the two extremes of the linking of the presence of a natural person H with a program T2 and the presentation of this person on a technical system T3. Figure 1a symbolizes an automatic linking, RVP acts analogous to H, and, thus, only during the time that H is acquired by the device T1. In Figure 1c, PVP also acts when H is no longer present and the programs in T2 are activated. In the world of future networks and systems, it will be of significance to know whether a program in T3 is still authorized by a user/prime mover to act. The user H will generate the conditions for the authenticity with an input device T4 in conformity with the patent.

In Figure 1b, a technical means T4 for authentication, namely documenting the veracity or, respectively, the presence of the user H is present. T4 can be implemented as apparatus for reading a plastic card that contains a code that identifies a user H. T4 can also enable a biometrical acquisition of the features of a user H. In the simplest case, T4 is implemented as keyboard via which the user H inputs an encoding for authentication. Via the data lines C2, the coding specific to the user H is forwarded into the system T2. By program, T2 generates a virtual person VP that is compiled of the greatest variety of program elements in T2 to form the one-time, individual-virtual person IVP. A particular feature of the patent is the time feedback C4 between user H and authentication. For example, a number like a PIN code is additionally input together with the insertion of a card into T4. This number is not located in the system T4 but only on the card. Only when there is agreement between PIN and information in the card has the authentication ensued. The input device T4 can repeatedly query via C4 as to whether H is still triggering inputs. The individual-virtual person IVP remains in existence, i.e. presented in the system T3, limited in time to the same time span wherein an authentication ensues in T4. The individual-

virtual person IVP only exist during the time duration that an authentication or, respectively, identification is present at the input device T4. This contrasts with the illustration in Figure 1c wherein the PVP remains active as long as the system T3 is active. The authentication assures that the IVP is not present in the system T3 when no authenticity from the user H is present on the basis of an identification. As described in the patent, anonymous parts of the individual-virtual person IVP can be present in the system T3 for purposes of data interrogation and/or for handling tasks. The complete, individual-virtual person IVP that contains all data and programs that were allocated to it by a user H is only present in the system as long as an authentication (veracity, guarantee) by the user H is established. It is also possible that the user H does not grant a complete authentication for his individual-virtual person IVP but only sends parts of the IVP into the system T3 in that he grants a limited authentication.

It is thus critical that the authenticated, virtual person - whether neutral-virtual or individual-virtual - requires a time-defined acquisition with a code or chip card or the output of a sonogram or a fingerprint of the user in order to be technologically created.

According to the patent (claim 1), apparatus T3 comparable to personal computers are utilized that allow natural persons H to be audio-visually imaged and/or simulated, these being called virtual persons. This virtual person simulates audio visual presentations of a type accorded natural persons at/in the apparatus by graphics, acoustics. Picture screens and/or loudspeakers are used for the audio-visual presentation. Picture screens are known in these apparatus T3 and display devices are utilized that can be constructed extremely thin, like pictures, capable of being hung on the wall. Devices are also being developed that allow three-dimensional presentations in a spatial volume. These devices assist the person in meeting numerous tasks such as writing, calculating by tabular calculation, telephoning, communicating via Internet, getting money, transferring money, booking

5 tickets for performances and travel, etc. Persons that use the apparatus for meeting tasks are called users H. As a result of the versatile use possibilities, the users H of these apparatus are confronted by the problem of learning the special operation of the apparatus via a keyboard and/or screen and/or optical/acoustic inputs/outputs. In a known way, menus are utilized for this purpose. A more advantageous aid for the user H is established in conformity with the patent when a virtual person generated by program is employed. A user H of the apparatus T3 thus does not communicate with a program that generates specific symbols and written characters or acoustic signals but with an embodiment of a program T2 that generates features similar to a person and is called virtual person. It is disclosed by the patent that a user H of the apparatus T3 and/or network C1....Cn can request his specific, individual person with the assistance of a device T4. This individual-virtual person IVP can only be activated via a specific encoding at/in the input apparatus T4. A specific, individual assistance in the form of an individual, virtual person referred to the user H is thus available to a user H. This individual-virtual person IVP has the features that are defined by the user H. In this way, this individual-virtual person IVP is distinguished as a specific, virtual person; recognizing this virtual person again can be possible for the user H in a way comparable to recognizing a natural person. The virtual person VP assists a user H in his individual utilization of the apparatus/network in a way that would be comparable to an arbitrary, human person.

25 The individual assistance can - according to user requests - can be optionally produced or, respectively, transmitted audio-visually by apparatus/network from remote devices in the form of a virtual person VP. Different virtual persons VP1, VP2....VPn can be present in the apparatus/network. A specific user H and/or group of users H1, H2....Hk is unambiguously allocated to a specific, individual-virtual person VP on the basis of an identifier and/or encoding and/or program. The allocation can  
30 ensue via the input of a code, for example with a card in an input device T4,

but can also ensue in T4 by interrogating fingerprints, technical, automatic interpretation of signatures or by other biometrical features that are unique to an individual person. The individual-virtual person IVP is activated on the apparatus T3, in the network C1....Cn only during a time span  $\Delta t$ . The time span  $\Delta t$  is defined by the identification of the user H with his specific feature in the input device T4. The input device T4 makes sure of the presence of the user - identification, the presence of the code - by a repeated feedback in time - such as a repeated query. During this time span  $\Delta t$ , the individual - virtual person IVP is authenticated in its actions by the user H for other users of the device T3, network C1....Cn. Authenticity in the sense of the patent means further uses of the devices T3, of the network C1....Cn can depend thereon that the individual-virtual person IVP is authorized to act by its user, master, creator, prime cause. When the authentication is ended by the input device T4, the individual-virtual person IVP is no longer authenticated to act.

The programs and data that define an individual-virtual person IVP can be present in various devices and systems T2a...T2x as sub-programs and/or sub-data. It is thus a matter of programs and/or data that are locally separate from one another. The compilation and/or joining of the sub-programs and/or data in a device T3 for the audio-visual presentation of a virtual, uniform person VP that is composed of all programs present locally separate can ensue time-dependent. The sub-units are combined into one unit at a device in a network, and the individual-virtual person IVP is authenticated to act only during the time span  $\Delta t$  when a user H of the device reveals himself with a specific feature and/or a coding. When the individual-virtual person IVP independently interrogates the input device T4 for the purpose of authenticity, it can also end its existence/activities on its own. Program parts that call delete routines in a known way given the omission of information can be connected to an individual-virtual person IVP.



5 A virtual person VP can have different data sets available to it that differ in terms of their security features. Some of the data can be available for an unprotected data inquiry, whereas others have data that can only be called by protected data interrogation. The protection of the data can ensue via specific keys or cryptographic methods that are called by encodings that are input into T4. The unprotected data can be presented on a technical device T3 by the virtual person VP given an inquiry. The unprotected data thus represent a part of an individual-virtual person. This part can be configured such that it is identical to other virtual persons. Many identical, virtual  
10 persons can also be presented as a neutral virtual person. The virtual, neutral person VP contains features that symbolize a specific situation or behavior of a person to a data inquirer. The protected, secured data that belong to an individual-virtual person IVP are not disclosed. The neutral, virtual person is limited in its action vis-a-vis the individual-virtual person IVP and can also be active during a time span that lies beyond Δt.

15 A home computer or PC is a technical device T3 that is provided with audio-visual devices such as displays, loudspeakers and devices for data storage and data processing as well as one or more microprocessors and is thus suitable for the presentation of virtual persons. An individual-virtual person IVP that is allocated to a specific user H of the PC on the basis of a specific coding and/or program can be presented on a PC. The device part T4 can be integrated in the PC. A specific virtual person is thus connected to a specific home computer.

20 Home computers contain operating systems that simplify the use of the various technical parts and/or functions of a home computer for persons. The individual-virtual person IVP appearing on the visible surface of a home computer can assume jobs that are implemented by traditional operating systems of a type currently in the marketplace. Further, a specific function can be carried out given the individual-virtual person IVP by cursor  
25 movement to a point, namely clicking a geometrical location of the individual-

virtual person. When touching the mouth, for example, voice output via loudspeaker can ensue. The presentation of the individual-person IVP is determined by the operation of the T4. A remote program vendor can thus determine whether programs are available beyond the time span  $\Delta t$ . An interaction of traditional operating system and individual, virtual person IVP can also ensue. For example, the help function as symbolized by a question mark on contemporary computers and which is widespread can be carried out by a virtual person. The virtual person can sit at the location of the question mark and is limited to the time of its authenticity in terms of its availability in time.

When an individual-virtual person appears on a device, a legible script can simultaneously also appear, this, for example, being linked to the virtual person symbolized as a "speech bubble". An information that can be read and/or heard by a person or can be interpreted in some other way can thus appear in addition to a virtual person. The writing can also appear when the functions for speech output are malfunctioning.

It is possible for a user H of a device to fashion his individual-virtual person into a standardized virtual person by expansion or, respectively, supplementation. First, a virtual person VP1 that belongs to a group of virtual persons VP1, VP2...VPn having comparable programs and/or data and/or features appears on a device. Programs, data and/or features are additionally added and/or joined to the VP1 only in the time span  $\Delta t$ , the VP1 thus assuming a specific embodiment. As a result of the specific features, the standardized or, respectively, neutral-virtual person VP1 becomes an individual-virtual person. It is thus possible for a user H to allocate his individual-virtual person to a specific basic type, for example male or female.

It can be desirable that data and/or programs are interrogated only in a specific time window and determine the properties of the individual-virtual person IVP. To this end, the interrogation of data and/or programs that are

allocated to an individual-virtual person IVP is only possible for data and/or programs that arose before a point in time or within a time span  $\Delta t$ . All data and/or programs are inhibited that arose before this point in time or beyond the time span  $\Delta t$ . The time can be present as a feature in encoded form in programs in the same way that it is currently present in memories and allocated to programs and data. The activation of technical devices and/or systems occurs controlled by time in this way and during the time of the authentication.

A plurality of natural persons can be simultaneously located in the proximity of an audio-visual registration device in a room. It can be meaningful that not all features, properties of an authenticated, virtual person are presented on a device as long as more than one person is in the room. A first person can be in the room who is authorized to recognize all features of a virtual person, whereby the second person does not have this authorization. In conformity with the patent, only a limited individual-virtual person IVP appears on the device during the time wherein at least two natural persons are found. The limited individual-virtual person IVP has only a part of the features, programs and/or data available to it that the complete individual-virtual person IVP has available to it.

Standardized virtual persons VP having described, standardized, recurring properties can be contained in a device or, respectively, communicative network, these also being called neutral virtual persons. This neutral virtual person VP is prepared for adaptation to user wishes and should facilitate the generation of an individual-virtual person VP for a user. A user who has a technical auxiliary available, for example a chip card or a remote control or a telephone, whereby data and programs are contained in these auxiliaries, can input these data or, respectively, programs into the communicative device/network and can thus modify the standard properties. It is thus possible that a standardized virtual person VP becomes an individual-virtual person VP by adding data, programs. This individual-virtual person VP can,

for example, have a voice and/or an appearance that seem familiar to a user. These properties can be maintained over longer times for the virtual person.

It is not necessary that the virtual person VP be generated in the device that is operated by the user. When the device operated by the user is connected to a remote device by communicative, line-bound connection, optical fiber as well, and/or wire-free connection, the virtual person VP can be generated in the remote device by a program and can be transmitted to the device at the location of the user.

It is possible that two virtual persons VP1, VP2 communicate via a network instead of their users H1, H2. The virtual persons VP1, VP2 can exchange data/program/information instead of the two users. Thus, for example, one virtual person VP1 can be assigned the job of retrieving the day of the week on which the year 2000 begins. There could be a virtual person in a communicative network that is specialized for supplying days of the week for days of the calendar. By bringing the two virtual persons together, the objective is achieved in that the week day is spoken by the VP1 for a user.

Users of electronic memory systems and/or communicative networks can have themselves represented by virtual persons that have only a part of the personal data of a user available to them. The neutral-virtual persons VP1, VP2...VPn have a part of the data available to a user stored. The data of the virtual persons VP1, VP2...VPn thus correspond to a sub-set of the data VD1, VD2...VDn of users H1, H2...Hk. The overall set of data of a user Hn can only be made available to the communicative network and/or device system via specific electronic encodings. For example, statistical data, for example traffic utilizations, can thus be acquired about persons without the personal, protected data of the persons being accessible.

A user H can also have himself represented by a specific virtual person VP in an electronic memory system and/or an electronic communicative network.

The example of seeking a day of the week for a calendrical date was recited above with respect thereto. The virtual person VP carries out jobs that are prescribed by a user H. When it is a matter of a virtual person having individually defined and unchanging features, this virtual person VP can be considered to be the representative of a user nU.

Two virtual persons VP1, VP2 can exchange data with one another, whereby the data exchange results in the modification of the individual features of a virtual person. A virtual person VP1 that encounters the virtual person VP2 in a program for a weather report can outfit himself with an umbrella that the virtual person VP2 has carried.

Likewise, a virtual person VP can independently modify itself by program, so that it can be sent on a trip to Hong Kong in a communicative network and can symbolically lie down on a bed in order to indicate that there is an influenza epidemic there and that it is not advisable to travel to Hong Kong. The modification of a virtual person makes it easier for the user H to understand the specific qualities of this virtual person VP.

A virtual person VP can be activated by events that were not caused by a user H. For example, a time of day can activate a virtual person, a user being awakened at the correct time as a result thereof. Likewise, an alarm system in a vacation home can activate a virtual person that informs its user.

A home computer can present a local, individual-virtual person whose properties are defined by an encoding that is connected to the home computer. This local, virtual person can be an unrestricted, individual-virtual person IVP. For example, a waiter in a restaurant can have a portable PC that represents an individual-virtual person IVP of a restaurant patron. The individual-virtual person IVP shows the menu of the restaurant. At some other location, the individual-virtual person IVP will show the schedule of the municipal mass transportation.

An individual-virtual person IVP can appear in a game and represent and/or replace a natural person. It is thus possible for a natural person to design a game with a specific, individual-virtual person as long as an authenticity is present. A teacher can be presented by an individual-virtual person IVP and can communicate lessons. It is thus defined that the individual-virtual person IVP acts in an authentic fashion.

When an individual-virtual person IVP is connected to a device that automatically receives data and/or programs from satellites, the virtual person can, for example, indicate where the device is located in the world.

Current films have natural persons as actors. These natural actors can also be presented by a virtual person IVP. Films and/or programs can be constructed such that virtual persons carry out the actions and are mixed into the executive sequence of programs. The virtual person carrying the action can be replaced by an individual-virtual person IVP. An action is thus produced that is carried by the individual-virtual person IVP that a user H defines as acting person. It is assured that the individual-virtual person IVP is authorized to perform the action only during the time span  $\Delta t$ .

An individual-virtual person IVP can be transmitted to remote devices via a communicative network. For example, a transmission can be provided into a device that is utilized in an underground pipeline network.

The individual-virtual person IVP can carry out specific operations and/or device settings in the remote device. When the operations and/or device settings correspond to those that a natural person has initiated, the remote device is controlled via an individual-virtual person that is authenticated by a user.

An individual-virtual person IVP accomplishes jobs in a device remote from the location of the user, whereby the device has technical equipment

available to it that can acquire data and/or programs in the remote environment, whereby the acquired data and/or programs are transmitted to the location of the user, whereby the remote data and/or programs are edited at the location of the user, the user H thus encountering an audio-visual environment that corresponds to the remote environment.

An individual-virtual person IVP can have a proposal list of behaviors and/or settings. This proposal list makes it possible for a user H to define specific, virtual properties of a virtual person IVP. Further, the communication between two natural persons can ensue via an individual-virtual person IVP.

An individual-virtual person IVP can appear as interpreter insofar as two natural persons at different devices would like to communicate in different languages. A first natural person can communicate with the individual-virtual person IVP in a first natural language and a second natural person can communicate therewith in a second natural language.

An individual-virtual person IVP can have encodings available that allow it to acquire specific, protective data and/or program areas in memories of devices T3. An individual-virtual person can contain specific numbers as encodings that allow it to interrogate protected memory areas.

A plurality of individual-virtual persons IVP1...IVPn can be present at the same time in a device at a location, this representing a virtual meeting of virtual persons IVP1...IVPn. When an individual-virtual person IVP lacks the feature of authentication, the virtual meeting can be automatically ended, so that a natural person can define how long it participates in a game or question session.

Remote medical diagnosis can ensue via mediation of an individual-virtual person IVP. A natural person to be diagnosed can be located at the location B. The allocated, individual-virtual person is sent to the diagnosis location

A by network at a device. For remote diagnosis of the condition of a natural person, the individual-virtual person IVP is questioned by a physician at the location B. The user H of the individual-virtual person IVP answers at the location B and authenticates the virtual person during a time span.

5 A virtual person can also be utilized for diagnosis. This virtual diagnostician can have individual information pertaining to the user H available to it. Given an encoder call of the virtual diagnostician, this can be available to a user/caller with specific information as long as it is authenticated.

10 A specific, geometrical area of an individual-virtual person IVP can be touched by mouse pointer with known methods. The touching displays data/program/graphics that are characteristic of the geometrical area.

15 Virtual persons can employ data for statistical purposes that are shared by many individual-virtual persons that do not reveal the natural persons that belong to the IVP. Such programs can make automated, statistical data collections about individual-virtual persons possible, whereby the data of the natural persons remain protected.

20 An individual-virtual person IVP can be connected to further devices via first devices by electromagnetic data communication. The further devices can be carried by a user H and can electromagnetically send data to the first devices. The individual-virtual person IVP can process the data and thus indicate the situation wherein the user H is, for example during a mountain hike.

25 A combination of devices is localized at a remote location at which known cards, those with or without chip, with contacts, contact-free, are offered for issue for one or more persons. These cards should be produced according to individual user requests and provided/loaded with data and/or programs. The communication to the remote devices ensues via various and



fundamentally known communication channels such as, for example, Internet. The cards should be made available to one or more users in the devices at the remote location by program. The cards are to be sent to the user H after being produced or are to be picked up by the user. The user H, for this purpose, uses an individual assistance via the electronic communication possibilities of the network. Selectively based on user requests, the individual assistance can ensue in the form of a natural person and/or in the form of a program and/or in the form of a virtual person VP. What is important is that the authenticity of the user is certain for the means for producing, programming cards. It would be disadvantageous if a first user had cards (non-authentic) produced for a second user in unauthorized fashion or provided with data (sums of money). The described measures for authentication is sure that cards can only be produced during an authentic time span.

When data for the authentication of a user failed to arrive in that they are not repeatedly produced by an input device T4, data sets and/or programs that characterized individual-virtual persons IVP can be erased.

A specific application of the invention is comprised in using virtual persons VP for issuing chip cards to natural persons in chip card issuing stations. This is a matter of a combination of the devices that are localized at one location. Cards with or without electronic chips that are to be issued to users are available in a magazine for one or more persons. Further, the cards can be produced according to individual user requests and can be provided/loaded with data and/or programs. As described above, there can be electronic communication channels to remote devices. The cards, devices, programs, electronic communication possibilities can be of such a nature or, respectively, arranged such that they are made available to one or more users. The device combination contains devices for printing/labeling new cards according to individual user requests. Various card types can be looked at on a screen and cards can be individually produced in conformity

with this prescription. Data and programs of various vendors of card services can be loaded into cards via the communication devices. The individual assistance in the use of the devices can ensue in the form of a natural person and/or in the form of a program and/or in the form of a virtual person VP. For example, a user at a card service station in New York can reserve an automobile via a car renting company in Paris in that the individual, virtual person allocated to the user is available for assistance according to the above descriptions. A card can be loaded with programs that a vendor of card services urges the card user via a virtual person allocated to the vendor.

The combination of devices that are localized at one location, for example the departure concourse in an airport, banking chamber, shopping mall, is referred to as card service center CSC. Audio-visual transmission devices for audio-visual communication between two persons via picture screen, microphone, loudspeaker and video camera are included in the combination of devices. Further devices can contain non-personalized cards that are kept on hand in magazines for personalization. The devices can also include registration devices of biometrical features such as electronic registrations of signatures or sampling fingerprints, palms, voice analyzers. These devices can be a matter of known devices that will also be offered in improved form in future. Parts of the RICH concept as disclosed in patents EPA 0 624 851 A1 and US 5,619,683 as "Reference International Card Harmonisation Coupler" are required in a card service center in order to introduce programs and data into the greatest variety of card types. The cards, devices, programs, electronic communication possibilities can be made available in a card service center to one person or a plurality of persons as users of a card service center. Such a card service center is symbolically shown in Figure 2. The technical devices of a card service center can be arranged in a circle; the individual user locations are referenced 1 through 6.

A significant property of a card service center (CSC) is that new, non-personalized cards can be made available according to individual user requests. To this end, neutral cards are kept on hand in a magazine of a CSC. The personal data made available in a CSC by a user can, for example, be loaded into cards via the RICH means. A printer means present in the CSC can individually design the surfaces of a card in that, for example, the picture of the user and further personal data such as name and address are printed onto the card. Another function of the CSC is the loading of existing cards of a user with data and/or programs. A user who already has a card can have his card loaded with new programs and data in a CSC. Thus, for example, the CSC can produce a connection to the account of the card owner and the storage for the telephone units on the card can be newly loaded. In the same way, sums of money, insurance services, etc., can be transferred into the card memory. Likewise, new programs can be loaded into the card with which the functions of the card are modified. For example, a card can be loaded with a program that makes it possible to transfer various biometrical features such as the fingerprint or visual features into the memory in compressed form. The program for this purpose can also be loaded short-term into the card and can in turn be subsequently erased, so that the program memory can be utilized for the greatest variety of purposes.

A further possibility of using a CSC is comprised in the assistance that is given by a virtual person that, thus, is composed of the compilation of technical programs, among other things. There can be a specific virtual person appearing the same in terms of its appearance or, respectively, its properties for a CSC that is available for all basic questions of a CSC. It can be a matter of questions that arise given initial use or at the start of operating a CSC. This first virtual person can then hand over to other service vendors who in turn make virtual persons available or that reply with natural persons. When a CSC user does not accept the assistance of a virtual person, he can request a natural person as an alternative. The advantage of a virtual person here is comprised therein that a natural person no longer incurs costs

for service and advice at a CSC. Whereas natural persons can only be available once per time unit for each provision of advice, virtual persons can be made multiply available during a time unit. Since only the programs that produce a virtual person are made available to a computerized, technical communication process, including display and interaction.

The communication with a virtual person can ensue audio-visually as well as via keyboard and picture screen. Given, thus, communication problems, for example unclear pronunciation of the user, the keyboard can be used for assistance, this making it easier for the programs behind the virtual person to unambiguously interpret information of a CSC user. A CSC user can also request the assistance of a natural person via a special key, this natural person intervening in the dialog between CSC user and virtual person and mediating help.

#### Commercial Application:

The method and the device can be particularly commercially employed for generating virtual persons that are allocated to a user H of technical devices in order to provide the user with help in the utilization of the devices. In particular, the invention is suitable for commercial output and personalizing of chip cards with data and programs in card issuing stations, whereby the virtual persons are authorized to act only during a specific time span.

**PATENT CLAIMS**

1. Method for audio-visual presentation of data and/or programs that are used by users (H) in communicative networks (C1...Cn) for the transmission and/or presentation of audio-visual data and/or programs (T2), upon employment of an electrical device (T3) having an optical and/or acoustic display means such as picture screen and/or loudspeaker for audio-visual presentation of these data and/or programs, characterized in that

1. a user (H) of the device (T3) and/or network (C1...Cn) can request individual assistance;
2. whereby the individual assistance is generated by a program (T2);
3. whereby the individual assistance, according to user requests, is selectively produced in the form of a neutral-virtual person (VP), being audio-visually produced on one or more devices (T3) by the programs and/or being transmitted by network (C1...Cn) to remote devices (T3);
4. whereby the neutral-virtual person (VP) is simulated with properties in the device (T3) comparable to a random, natural person;
5. whereby the neutral-virtual person (VP) assists the user (H) in his individual use of the device (T3) and/or network (C1...Cn) in a way that is comparable to a random, human person;
6. whereby a specific user (H) and/or a group of users (H1, H2....Hk) has a specific, individual-virtual person (IVP) unambiguously identified by an identifier and/or encoding and/or program allocated to it;
7. whereby the input of the identifier ensues via an input means (T4) into which information are input acoustically or optically or mechanical or tactilely with optical or acoustic or tactile devices or a keyboard;
8. whereby the individual-virtual person (IVP) is only activated on the device (T3), in the network (C1...Cn) during a time span  $\Delta t$ ;
9. whereby the time span  $\Delta t$  is determined by the identification of the user (H) with his specific feature or features, his specific identifier or identifiers via a repeated interrogation (C4) in the input device (T4);

10.   wherewith the individual-virtual person (IVP) is authenticated in terms of its action by the user (H) for one or more users (H1..Hn) during the time span  $\Delta t$ .

2.   Method according to claim 1, characterized in that

1.   a compilation and/or joining of sub-programs and data (T2) in the device (T3) is required for audio-visual presentation of the individual-virtual person (IVP);

2.   whereby the sub-programs are locally present in various devices or memories or are present locally separated;

3.   whereby the sub-programs are to be activated with a feature and/or it own, specific encoding or with a shared, uniform code/feature;

4.   whereby the code is automatically repeatedly interrogated by the individual-virtual person (IVP) and is only generated during the time span  $\Delta t$ ;

5.   whereby the sub-programs are not joined, compiled and/or kept active given failure of the code to arrive.

3.   Method according to claim 1 or 2, characterized in that

1.   the neutral-virtual person (VP) has data available that are available for an unprotected data inquiry and has data available that are exclusively available for a protected data inquiry;

2.   whereby the unprotected data are presented by neutral-virtual person (VP) given an inquiry at the device (T3);

3.   whereby the neutral-virtual person (VP) has properties available that are the same for a plurality of neutral-virtual persons (VP1, VP2...VPn);

4.   whereby the neutral-virtual person (VP) is authorized vis-a-vis a data inquiry only for a behavior that is restricted compared to the authentic individual-virtual person (IVP).

4.   Method according to claim 1 or 2, characterized in that

1. the individual-virtual person (IVP) appears on the picture screen or the display means of a home computer and/or PC;
2. whereby the individual-virtual person (IVP) is allocated to the user (H) by a specific encoding and/or a program;
3. whereby the input device (T4) is integrated as device part in the home computer and/or PC.

5           5. Method according to claim 1 or 2, characterized in that the individual-virtual person (IVP) appearing on a home computer or PC assumes the jobs that are implemented by operating systems on the basis of user interfaces.

10           6. Method according to claim 4 or 5, characterized in that parts of the user interface of an operating system are supplemented by an individual-virtual person (IVP).

15           7. Method according to claim 4 or 5 or 6, characterized in that, simultaneously with the appearance of the individual-virtual person (IVP) on the picture screen or the display means of the home computer and/or of the PC, an information that can be read and/or heard or interpreted in some other way by a person appears.

- 20           8. Method according to claim 4 or 5 or 6, characterized in that
1. a first neutral-virtual person (VP1), that belongs to a group of different neutral-virtual person (VP1, VP2...VPn) with comparable programs and/or data and/or features appears first in time on the device (T3) or home computer or PC;
  2. whereby this neutral-virtual person (VP1) additionally assumes programs and/or data and/or features at the later point in time of the authentication in the input device (T4);
  3. whereby the additional programs lead to a specific embodiment of the neutral-virtual person (VP1);
- 25

4.       wherewith this neutral-virtual person (VP1) becomes the individual-virtual person (IVP).

9.       Method according to claim 1, characterized in that the interrogation of data and/or programs allocated to the individual-virtual person (IVP) is only possible for data and/or programs that have arisen before a point in time or within a time span  $\Delta t$  and is inhibited for all further data and/or programs that have arisen after this point in time or beyond this time span.

10.      Method according to claim 1, characterized in that

1.       the input device (T4) can identify more than one natural person in its limited, spatial environment on the basis of optical and/or acoustic sensors;
2.       whereby the individual-virtual person (eIVP) is presented for the person only to a limited extent on the display means of the device (T3) during the time at least two natural persons are identified;
3.       whereby this restricted, individual-virtual person (eIVP) has only a part of the features, programs and/or data available to it that the complete individual-virtual person (IVP) has available to it.

11.      Method according to claim 1, characterized in that

1.       a local, individual-virtual person (IVP) exits;
2.       whereby this local, individual-virtual person (IVP) is a restricted, individual-virtual person (eIVP) and is presented for persons on and/or in the local display means of the audio-visual device (T3);
3.       whereby the local, individual-virtual person (IVP) is defined with its features, programs and/or data by properties and/or encodings which a device has locally available to it during the time span  $\Delta t$ , said device calling and/or presenting the restricted, individual-virtual person (eIVP).



12. Method according to claim 1 or 11, characterized in that an individual-virtual person (IVP) appears as a participant for natural persons in a game such as chess on the display means of the audio-visual device (T3) and/or PC and/or home computer.

13. Method according to claim 1 or 11, characterized in that an individual-virtual person (IVP) simulates a teacher for the communication of lessened contents for a learning person.

14. Method according to claim 1 or one of the claims 11 through 13, characterized in that the audio visual device (T3) is connected to a means for generating the individual-virtual person (IVP), said means automatically receiving data and/or programs from satellites.

15. Method according to claim 1 or one of the claims 11 through 14, characterized in that

1. a neutral-virtual person (VP) is mixed into the executive sequence of programs;
2. whereby the program represent sequences of actions, comparable to films;
3. whereby the neutral-virtual person can be replaced by an individual-virtual person (IVP);
4. whereby the individual-virtual person (IVP) assumes the predetermined action role of the virtual person (VP).

16. Method according to claim 1 or one of the claims 11 through 15, characterized in that

1. an individual-virtual person (IVP) is transmitted to remote devices (T3) via a communicative network (C1...Cn);
2. whereby the individual-virtual person (IVP) implements specific operations and/or device settings in the remote devices (T3);

3. whereby the operations and/or device settings correspond to those that a natural person has initiated for an individual-virtual person (IVP) via setting and/or programming.

17. Method according to claim 1 or one of the claims 11 through 16, characterized in that

1. an individual-virtual person (IVP) carries out tasks in a device (T3) remote from the location of the user (H);
2. whereby the device (T3) has technical devices available to it that can acquire data and/or programs in the remote environment;
3. whereby the acquired and/or programs are transmitted to the location of the user (H);
4. whereby the remote data and/or programs are edited at the location of the user (H);
5. wherewith the user (H) encounters an audio-visual environment that corresponds to the remote environment.

18. Method according to claim 1 where one of the claims 11 through 17, characterized in that

1. an individual-virtual person (IVP) has a proposal list of behaviors and/or settings available to it;
2. whereby user (H) can determine the settings by selection;
3. wherewith the individual-virtual person (IVP) is lent specific properties.

19. Method according to claim 1 or one of the claims 11 through 18, characterized in that a first natural person communicates with a second natural person via an individual-virtual person (IVP).

20. Method according to claim 1 or one of the claims 11 through 19, characterized in that

1. a first natural person communicates with an individual-virtual person (IVP) in a first natural language;

2. whereby the individual-virtual person (IVP) communicates with a second natural person in a second natural language.

21. Method according to claim 1 or one of the claims 11 through 20, characterized in that

1. an individual-virtual person (IVP) has specific encodings available;
2. whereby the encoding allow the individual-virtual person (IVP) to acquire specific protected data and/or program areas.

22. Method according to claim 1 or one of the claims 11 through 21, characterized in that

1. a plurality of individual-virtual persons (IVP1....IVPn) are present at the same time in a device (T3) at a location;
2. wherewith a virtual meeting of virtual persons (IVP1...IVPn) is produced during the time  $\Delta t$ .

23. Method according to claim 1 or one of the claims 11 through 22, characterized in that

1. an individual-virtual person (IVP) is used via the communicative network (C1....Cn) or, respectively, device (T3) at the location B for remote diagnosis of the condition of a natural person at a location A;
2. whereby the natural person to be diagnosed is located at the location B;
3. whereby the natural person at the location A controls the replies of the individual-virtual person (IVP) at the location B via the communicative network (C1...Cn) or, respectively, device (T3).

24. Method according to claim 1 or one of the claims 11 through 23, characterized in that

1. a virtual person is available as virtual diagnostician for diagnosis via the communicative network (C1...Cn) or, respectively, device (T3);

2. whereby an individual-virtual diagnostician has information available that are allocated to a specific user (H);
3. whereby, when this virtual diagnostician is called, this is available to the user/caller with specific information during the time span  $\Delta t$ .

25. Method according to claim 1 or one of the claims 11 through 24, characterized in that

1. a specific geometrical area of an individual-virtual person (IVP) can be optically/graphically touched by mouse pointers;
2. whereby the touching displays data/program/graphics that are characteristic of the touched, geometrical region.

26. Method according to claim 1 or one of the claims 11 through 25, characterized in that

1. an individual-virtual person (IVP) can activate programs;
2. whereby these activated programs can interrogate/collect data from a plurality of individual-virtual persons (IVP1...IVPn) with the communicative network (C1...Cn) or, respectively, devices (T3);
3. wherewith automated, statistical data collections about individual-virtual persons are possible.

27. Method according to claim 1 or one of the claims 11 through 26, characterized in that

1. an individual-virtual person (IVP) is connected to devices by electromagnetic data communication;
2. whereby the devices are worn by a user (H);
3. whereby the individual-virtual person (IVP) processes the data that derive from the device of the user.

28. Method according to claim 1, characterized in that

1. a combination of devices (T2, T3, T4) is localized at a remote location at which cards such as chip cards

are edited for issue,  
are produced according to individual user requests,  
are provided/loaded with data and/or programs

for one or more persons;

2. whereby one or more electronic communication channels to the remote devices are selectively present;
3. whereby the cards, devices, programs at the remote location are made available to one or more users via electronic communication possibilities;
4. whereby new cards can be produced at the remote location according to individual user requests;
5. whereby the cards are sent to the user (H) or are picked up by the user (H) after being produced;
6. whereby the user (H) can request an individual assistance via the electronic communication possibilities;
7. whereby the individual assistance, based on the request of the user (H), is made available
  - by a natural person,
  - and/or in the form of a program,
  - and/or in the form of the virtual person (VP)

29. Method according to one of the preceding claims, characterized in that, given the failure of data, information as generated by the input device (T4) for authentication to arrive, data holdings and/or programs that have characterized or, respectively, defined individual-virtual persons (IVP) are erased.

30. Electrical device (T3) for audio-visual presentation of data and/or programs that are used by users (H) in communicative networks (C1...Cn) or the transmission and/or presentation of audio-visual data and/or programs (T2), whereby the device (T3) comprises an optical and/or acoustic display

means such as picture screen and/or loudspeaker for audio-visual presentation of these data and/or programs, characterized

1. a user (H) of the device (T3) and/or network (C1...Cn) can request individual assistance;
2. whereby the individual assistance is generated by a program (T2);
3. whereby the individual assistance, based on user requests, is selectively produced in the form of a neutral-virtual person (VP) by the programs, being audio-visually produced on one or more devices (T3) and/or being transmitted to remote devices (T3) by network (C1...Cn);
4. whereby the neutral-virtual person (VP) is simulated with characteristics in the device (T3) that are comparable to a random, natural person;
5. whereby the neutral-virtual person (VP) assists the user (H) in his individual use of the device (T3) and/or network (C1...Cn) in a way comparable to a random, human person;
6. whereby a specific user (H) and/or a group of users (H1, H2...Hk) has a specific, individual-virtual person (IVP) allocated to it unambiguously identified by an identifier and/or encoding and/or program;
7. whereby the input of the identifier ensues via an input device (T4) into which information are input acoustically or optically or mechanically or tactilely with optical or acoustic or tactile devices or a keyboard;
8. whereby the individual-virtual person (IVP) is only activated on the device (T3), in the network (C1...Cn) during a time span  $\Delta t$ ;
9. whereby the time span  $\Delta t$  is determined by the identification of the user (H) with his specific feature/features, his specific identifier/identifiers via a repeated interrogation (C4) in the input device (T4);
10. wherewith the individual-virtual person (IVP) is authenticated in terms of its actions by the user (H) for one or more users (H1...Hn) during the time span  $\Delta t$ .
31. Device according to claim 30, characterized in that

1. a combination of devices (T2, T3, T4) is localized at a remote location at which cards such as chip cards  
are edited for issue,  
are produced according to individual user requests,  
are provided/loaded with data and/or programs  
for one or more persons;
  2. whereby, optionally, one or more electronic communication channels are present to the remote devices;
  3. whereby the cards, devices, programs at the remote location are made available to one or more users via electronic communication possibilities;
  4. whereby new cards are produced at the remote location according to individual user requests;
  5. whereby the cards are handed over to the user (H) after being produced;
  6. whereby an individual assistance can be requested by the user (H) via the electronic communication possibilities;
  7. whereby the individual assistance, based on the request of the user (H), is optionally performed  
by a natural person,  
and/or in the form of a program,  
and/or in the form of the virtual person (VP).
- 
32. Device according to claim 30 or 31, characterized in that
  1. a first part of the devices is a card magazine for keeping different, non-personalized chip cards on hand;
  2. whereby the properties of a chip card can be defined by the user (H);
  3. whereby the user makes use of a virtual person (VP) for determining/producing the use of the chip card.

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#3

**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION**  
**ERKLÄRUNG FÜR PATENTANMELDUNGEN MIT VOLLMACHT**  
**German Language Declaration**

Als nachstehend benannter Erfinder erkläre ich hiermit  
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Staatsangehörigkeit den im Nachstehenden nach  
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Antrag gestellt wird und für den ein Patent beantragt  
wird für die Erfindung mit dem Titel:

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as  
stated below next to my name,

I believe I am the original, first and sole inventor (if only  
one name is listed below) or an original, first and joint  
inventor (if plural names are listed below) of the subject  
matter which is claimed and for which a patent is sought  
on the invention entitled

VIRTUAL PERSONS FOR ASSISTING IN THE USE OF  
DEVICES AND COMMUNICATIVE NETWORKS,  
PARTICULARLY FOR ASSISTING IN THE OUTPUT  
OF INDIVIDUALLY USEABLE CARDS"  
the specification of which

(zutreffendes ankreuzen)

☐ hier beigefügt ist.

☒ am \_\_\_\_\_ als  
PCT internationale Anmeldung  
PCT Anmeldungsnummer \_\_\_\_\_  
eingereicht wurde und am \_\_\_\_\_  
abgeändert wurde (falls tatsächlich abgeändert).

Ich bestätige hiermit, dass ich den Inhalt der obigen  
Patentanmeldung einschliesslich der Ansprüche  
durchgesehen und verstanden habe, die eventuell durch  
einen Zusatzantrag wie oben erwähnt abgeändert  
wurde.

Ich erkenne meine Pflicht zur Offenbarung  
irgendwelcher Informationen, die für die Prüfung der  
vorliegenden Anmeldung in Einklang mit Absatz 37,  
Bundesgesetzbuch, Paragraph 1.56(a) von Wichtigkeit  
sind, an.

Ich beanspruche hiermit ausländische Prioritätsvorteile  
gemäss Abschnitt 35 der Zivilprozessordnung der  
Vereinigten Staaten, Paragraph 119 aller unten  
angegebenen Auslandsanmeldungen für ein Patent oder  
eine Erfindersurkunde, und habe auch alle  
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Erfindersurkunde nachstehend gekennzeichnet, die ein  
Anmeldedatum haben, das vor dem Anmeldedatum der  
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(check one)

☒ is attached hereto

☐ was filed on \_\_\_\_\_ as  
PCT international application  
PCT Application No. PCT/EP98/06107  
and was amended on \_\_\_\_\_

(if applicable)

I hereby state that I have reviewed and understand the  
contents of the above identified specification, including  
the claims as amended by any amendment referred to  
above.

I acknowledge the duty to disclose information which is  
material to the examination of this application in  
accordance with Title 37, Code of Federal Regulations,  
§1.56(a).

I hereby claim foreign priority benefits under Title 35,  
United States Code, §119 of any foreign application(s)  
for patent or inventor's certificate listed below and have  
also identified below any foreign application for patent or  
inventor's certificate having a filing date before that of  
the application on which priority is claimed:

# German Language Declaration

Prior foreign applications  
Priorität beansprucht

Priority Claimed

197 42 237.3 Germany 09-25-97  
(Number) (Country) (Day Month Year Filed)  
(Nummer) (Land) (Tag Monat Jahr eingereicht)

☒ ☐  
Yes No  
Ja Nein

(Number) (Country) (Day Month Year Filed)  
(Nummer) (Land) (Tag Monat Jahr eingereicht)

☐ ☐  
Yes No  
Ja Nein

(Number) (Country) (Day Month Year Filed)  
(Nummer) (Land) (Tag Monat Jahr eingereicht)

☐ ☐  
Yes No  
Ja Nein

Ich beanspruche hiermit gemäss Absatz 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 120, den Vorzug aller unten aufgeführten Anmeldungen und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in einer früheren amerikanischen Patentanmeldung laut dem ersten Paragraphen des Absatzes 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 122 offenbart ist, erkenne ich gemäss Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung und dem nationalen oder PCT internationalen Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §122 I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Serial No.) (Filing Date)  
(Anmeldeseriennummer) (Anmeldedatum)

(Status) (Status)  
(patentiert, anhängig, (patented, pending,  
aufgegeben) abandoned)

(Application Serial No.) (Filing Date)  
(Anmeldeseriennummer) (Anmeldedatum)

(Status) (Status)  
(patentiert, anhängig, (patented, pending,  
aufgegeben) abandoned)

Ich erkläre hiermit, dass alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und dass ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, dass wissentlich und vorsätzlich falsche Angaben gemäss Paragraph 1001, Absatz 18 der Zivilprozessordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden koennen, und dass derartig wissentlich und vorsätzlich falsche Angaben die Gültigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentes gefährden können.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

# German Language Declaration

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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

22. And I hereby appoint Messrs. John D. Simpson (Registration No. 19,842), Dennis A. Gross (24,410), Robert M. Barrett, (30,142), Steven H. Noll (28,982), Kevin W. Guynn (29,927), Robert M. Ward (26,517), Brett A. Valiquet (27,841), Edward A. Lehman (22,312), David R. Metzger (32,919), Todd S. Parkhurst (26,494), James D. Hobart (24,149), Melvin A. Robinson (31,870), John R. Garrett (27,888), Paula J. Kelly (37,624), John W. Cornell (30,619), Robert J. Depke (37,607), Joseph P. Reagen (35,332), Michael R. Hull (35,902), Michael S. Leonard (37,557), William E. Vaughan (39,056), Lewis T. Steadman (17,074) and Marvin Moody (16,549), all members of the firm of Hill & Simpson, A Professional Corporation

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